



City of Seattle

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Department of Design, Construction and Land Use

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CITY OF SEATTLE ANALYSIS AND DECISION OF THE DIRECTOR OF THE DEPARTMENT OF DESIGN, CONSTRUCTION AND LAND USE

Application Number: 2302697
Applicant Name: Jennifer Grant for the Port of Seattle
Address of Proposal: 7001 Seaview Avenue NW

SUMMARY OF PROPOSED ACTION

Shoreline Substantial Development Permit for future construction of twenty-one (21) relocated replacement docks, construction on one new dock and a new communications building. Project includes relocation of existing clubhouse and fuel float, and reconfiguration of existing parking. Addendum to Shilshole Marina Supplemental Environmental Impact Statement prepared by the Port of Seattle.

Seattle Municipal Code (SMC) requires the following approvals:

Shoreline Substantial Development Permit - To replace and relocate existing docks for a recreational marina in an Urban Stable (US) shoreline environment. (SMC 23.60.020 and 23.60.600 B)

Shoreline Substantial Development Permit - To relocate a nonconforming yacht club (Corinthian Yacht Club) in an Urban Stable (US) shoreline environment. (SMC 23.60.020 and 23.60.122 B)

SEPA - For conditioning only. (Chapter 25.05 Seattle Municipal Code)

SEPA DETERMINATION: [] Exempt [X] DNS¹ [] MDNS [] EIS
[] DNS with conditions
[] DNS involving non-exempt grading or demolition or involving another agency with jurisdiction.

¹ The Port of Seattle, acting as lead agency, has reviewed this proposal and determined that it is a minor change that is within the scope of the original *Shilshole Bay Marina Dock Replacement/Moorage Expansion Project Supplement EIS* and would result in no significant impacts, thus issuing an Addendum on May 23, 2003.

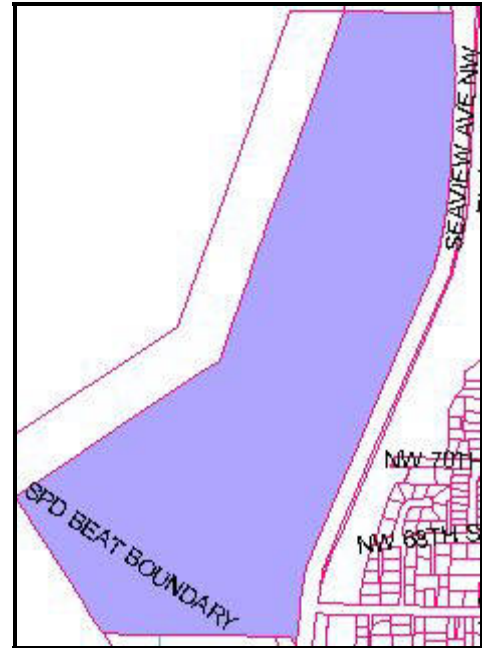
BACKGROUND DATA

Site Location

Shilshole Bay Marina is located on the east shore of Puget Sound, north of West Point, north of the Ballard Locks. The marina is bordered by Golden Gardens Park on the north, Seaview Avenue Northwest on the east, Sunset West Condominiums on the south and Puget Sound on the west. The dock replacement layouts are shown on Addendum Figures 2 and 3. The property is within an Urban Stable (US) shoreline environment and an underlying Commercial 1 (C1) zone with a 40-ft height limit (C1 40' US).

Environmental Documents

The Addendum to the *Shilshole Bay Marina Dock Replacement/ Moorage Expansion Project Supplemental EIS* (Draft SEIS: February 2000, SEPA File No. 00-01; and Final SEIS: February 2001; POS SEPA File No. 01-04) is an environmental document used to provide additional information or analysis that does not substantially change the analysis of significant impacts and alternatives in the existing environmental document (WAC 197-11-706).



Following issuance of the Final SEIS, the Port Commission on March 27, 2001, adopted the SEIS and authorized implementation of the following alternatives described therein: the main marina Scoping Response Alternative, the North-End Sailing Center Improvements, and the 7-year construction schedule (the “selected SEIS Alternative”). The Final SEIS and Port Commission Resolution No. 3439 stated that additional mitigation measures to avoid and minimize impacts would be evaluated in the design phase of the project. Additional mitigation measures have now been incorporated into the project, particularly a reduction in the amount of intertidal/shallow subtidal shading. The Addendum provides additional information and analysis of the environmental impacts.

The SEPA Addendum describes design refinements to the selected SEIS Alternative, and compares the environmental impacts expected to result from the design refinements with those expected to result from the selected SEIS Alternative. In order to describe the change from existing conditions, the design refinements are also compared to the existing marina configuration. Major design refinements include:

- An increase in total lineal feet of moorage to be provided, though a reduction in the overall berth count, due to a larger number of larger berths with the design refinements.
- Modifications to the navigation channel width: increases in the area of the fuel float and at the north entrance to the marina.
- Central Pier demolition and replacement with a floating dock (compared to Central Pier reconstruction under the selected SEIS Alternative).
- Relocation of the fuel float one dock southward.
- Utility and infrastructure upgrades to serve the dock replacement project.

As a result of the design refinements, some environmental impacts anticipated with the dock replacement project have changed. Differences from the environmental impacts described in the SEIS are summarized as follows:

- Reduction in the amount of intertidal/shallow subtidal shading.
- Removal of a larger number of treated piles from the marine environment.
- Reduction in the number of new piles required to construct the dock replacement project.
- Avoidance of eelgrass through dock reconfiguration.
- Reduction in views of mountains and water across the site from Seaview Avenue NW associated with the Corinthian Yacht Club (CYC) clubhouse relocation.
- Increase in construction disturbance between Seaview Avenue NW and the seawall due to utility and infrastructure upgrades.

Detailed descriptions of the design refinements and quantitative comparisons with the selected SEIS Alternative and existing marina configuration are provided in a Background Information appendix to the SEPA Addendum. The Background Information document is part of the Port's SEPA file on this project and may be obtained from David McCraney, Corporate Environmental Services, Port of Seattle, PO Box 1209, Seattle, WA 98111, 206-728-3193. These descriptions are summarized in Section 7 of the Addendum. Additional information about the Affected Environment is provided in Section 8 of the Addendum. Additional analysis of environmental impacts and measures proposed to avoid or minimize impacts is included in Section 9 of the Addendum.

Proposed Project Description

Dock Replacement Proposal: Design Refinements—Based on an engineering review by Reid Middleton (consultant to the Port of Seattle), input received during public meetings, and discussion with marina staff and user groups, preliminary design of the selected SEIS Alternative has been refined in preparation for applying for permits. The various elements of design refinement are briefly described below, and in more detail in Appendix A of the Addendum. Most of these are dock configuration and navigational features that will result in little, if any, environmental impact, but are important in terms of meeting the purpose and objectives of the proposal, including improving customer satisfaction (see Section 1.3 of the Final SEIS, page 5).

Design refinements for the Shilshole Bay Marina dock replacement project will result in fewer berths overall than the selected SEIS Alternative, and fewer than the number in the existing marina configuration. A total of 1,409 berths are now proposed. This number is 103 fewer than the selected SEIS Alternative, and 91 fewer than the existing configuration of the marina.

While the design refinements will result in a net reduction in the total number of moorage berths compared to either the existing marina configuration or the selected SEIS Alternative, the refinements will generate a net increase in total lineal feet of moorage due to the increased number of larger berths. The change from the existing configuration is +3,916 lineal feet. The change from the selected SEIS Alternative is +1,770 lineal feet.

Refinements to the dock replacement layout are shown on Addendum Figures 2 and 3. Addendum Figure 2 compares the design refinements to the existing marina configuration. Addendum Figure 3 compares the design refinements to the selected SEIS Alternative. Refinements to the selected SEIS Alternative include:

- Increasing berth-length diversity.
- Providing longer gangways.
- Replacing Central Pier with a floating dock.
- Relocating the guest dock (transient moorage) and fuel float southward (to the new H-dock).
- Increasing fairway widths for berths 46 feet in length or greater (from 1.6 x berth length to 1.65 x berth length; 1.9 associated with the large-berth commercial float).
- Increasing the navigation channel width at the west end of docks.
- Increasing the turning basin diameter.
- Modifying the west end of docks C, D, and E where exposure to south entrance channel wave action was a concern.
- Modifying the finger pier configuration on the north ½ of V-dock and removing some moorage berths, reorienting and relocating the Corinthian Yacht Club (CYC) clubhouse at the east end of this dock.
- Eliminating moorage berths from the north ½ of W-dock.
- Upgrading utilities and infrastructure.

Number of Berths and Berth Length Diversity—The following changes to the number, size and configuration of berths have been made with the design refinements:

- No berths less than 30 feet in length
- Fewer 30-ft berths
- More intermediate berth lengths between 30 feet and 48 feet: 34-ft, 36-ft, 38-ft, 40-ft, 42-ft, and 46-ft berths
- More berths in the 60-ft to 100-ft range
- Angled outer berths on C-dock and D-dock to shield adjacent docks to the north from wind and waves entering the marina through the south entrance channel
- Moorage berth reduction within the north-end sailing center.

Gangways and Headwalks—The design refinements retain the headwalk concept from the selected SEIS Alternative, but provide slightly longer gangways by angling these structures from a small shoreside access pier (see Addendum Figure 3). Gangways will serve pairs of docks, as originally proposed with the selected SEIS Alternative. The access piers – trapezoidal in shape – will provide staging and waiting areas at the head of gangways, and provide a structure to support the top of the gangways so that the gangways do not interfere with the existing seawall promenade (sidewalk). The new access piers will be designed with fiber-reinforced plastic grated surfacing to avoid shading in the intertidal/shallow subtidal habitat zone (see Addendum Figure 4). The dimensions of proposed access piers are 24 feet wide along the seawall, tapering to 12 feet wide at a distance 12 feet waterward from the seawall.

Central Pier Demolition—The dock replacement design refinements include replacing Central Pier with a floating dock (see Addendum Figure 3). The fixed central pier structure will be demolished. Demolishing the fixed pier will remove 291 treated-timber piles, including fender piles. Many of these piles are in a deteriorated condition, and would require significant repair and maintenance for long-term retention. Proposed design refinements will replace the fixed pier and the two adjacent linear floating docks to the south with a new I-dock that has larger berths on both sides.

The function of a small Port maintenance office on Central Pier (the A-2 building) will be relocated to the upland area of the marina.

H and I Dock Reconfiguration—Design refinements to H- and I-dock replace functions currently provided on Central Pier. H-dock will be the new guest (transient moorage) dock and fuel float. Seventeen 50-ft berths will be provided on the south side of the dock, with provisions for side-tie moorage on the north. The new I-dock will have fifty berths 42 to 70 feet in length (see Addendum Figure 3). Proposed use of I-dock will be two-thirds commercial and one-third recreational moorage.

The new H-dock and I-dock will each have their own gangway access, in contrast to the proposal for the remainder of the marina; in which pairs of docks will be served by one gangway (see Addendum Figure 3). I-dock will also have a separate, extra-long, dedicated ADA-accessible gangway to provide easily accessible moorage facilities for the public and persons with mobility limitations. A linear float will connect H- and I-dock to one another with side-tie moorage provisions on the west side (see Addendum Figure 3).

Fuel Float Relocation—The existing fuel float will be relocated to the new H-dock. This will require extending fuel lines southward to H-dock. The point of connection to existing piping will be at the seawall, so there will be no landside work (e.g., trenching) to relocate fuel lines.

All new fuel lines will be designed and installed in accordance with required fire safety codes and spill prevention regulations (described in the Central Pier Marine Lube Center SEPA Checklist, March 4, 2003, POS SEPA File No. 03-03). All new systems will have required sumps, piping material, and safety measures required for fuel supply systems. The existing fuel tanks and landside piping system will remain in-place. New fuel lines will be installed internal to H-dock with flexible connections to existing fuel lines in the existing fuel float. Best Management Practices will be used during the switchover to the new system and demolition of existing fuel lines beneath Central Pier. These are described in SEPA Addendum Section 9.1, Water Quality.

Recreational and Commercial Moorage—The design refinements will result in an increase in recreational moorage over the selected SEIS Alternative, and over the existing marina configuration: approximately 2,490 lineal feet more recreational moorage than with the selected SEIS Alternative, and approximately 3,786 lineal feet more recreational moorage than the existing configuration.

Commercial moorage provisions will be less (-720 lineal feet) than the selected SEIS Alternative as a result of design refinements, though slightly more than in the existing configuration (+130 lineal feet).

The amount of dedicated commercial moorage proposed with design refinements is based on the existing demand for commercial moorage. Commercial moorage will occupy a portion of the new I-dock. Additional commercial moorage can be designated on I-dock if demand increases in the future.

Fairway Width—Proposed design refinements will, in general, increase the fairway width for berths 46 feet and larger to 1.65 times berth length, compared to 1.6 times berth length with the selected SEIS Alternative. Increased berth-length diversity in the design refinements created the opportunity to widen fairways for larger berths while still adding one additional floating dock, consistent with the objective to increase the amount of moorage within the marina.

Navigation Channel Width—All docks from B through U will be extended further west than in the existing marina configuration; however, the westward extension of docks with design refinements is equal to or slightly less than with the selected SEIS Alternative.

The design refinements increase the navigation channel width in the vicinity of the south entrance to the marina to approximately 200 feet, compared to 150 feet with the selected SEIS Alternative (see Addendum Figure 3). As with the analysis of the SEIS Alternative, these navigation channel widths assume that vessels up to 21 feet wide at the beam will be moored on the west end of each dock.

The minimum channel width in the vicinity of the fuel dock is 190 feet in the existing configuration of the marina. It would also have been 190 feet with the selected SEIS Alternative, as no change was proposed to Central Pier or the fuel float. With design refinements, the fuel float will be relocated to H-dock, where the navigation channel width will be 180 feet (see Addendum Figure 2).

The north entrance channel width with design refinements exceeds that of the selected SEIS Alternative (148 feet compared to 120 feet), or the existing marina configuration (140 feet). Vessels will not be moored on the channel-side (west end) of the dinghy float. Increasing the north entrance channel width responds to concerns expressed by north-end sailing center users regarding conflicts between sailing dinghies and motorized vessels at this location.

Turning Basin Diameter—Design refinements will result in increasing the turning basin diameter to 400 feet compared to 360 feet with the selected SEIS Alternative. The increased turning basin diameter is in response to operational concerns expressed by some marina users for maintaining adequate maneuvering and emergency anchorage area within the turning basin. Tugboat company representatives, fishermen, and moorage customers were consulted to determine the use and requirements for the turning basin. At 400 feet, the turning basin diameter will be 140 feet less than the existing marina configuration (540 feet).

North-End Sailing Center Design Refinements—The North-End Sailing Center Improvements alternative evaluated in the SEIS and selected by Port Commissioners has been modified based on meetings with a north-end sailing center committee comprised of tenants and user groups. These improvements will also modify the existing configuration of the north-end sailing center (see Addendum Figures 5 and 6). A wider launch-and-retrieval float is proposed at the seawall-end of what will be called W-dock in the dock replacement project, to improve dolly maneuvering area and dinghy launching area. Berths on the north side of the dinghy dock float (now W-dock) have been eliminated to improve circulation between the dinghy floats and the northernmost launch pier float (now called X-dock with the design refinements). There will be fewer berths on the north side of the new V-dock, and these berths will be larger (40 feet) than the SEIS North-End Sailing Center alternative (25- to 30-ft berths). The Corinthian Yacht Club (CYC) clubhouse will be relocated to V-dock, consistent with the selected SEIS Alternative; however, the proposal is to reorient the clubhouse on the diagonal, rather than parallel to the seawall as described in the selected SEIS Alternative (see Addendum Figure 6). An additional hoist pier will be added adjacent to (north of) the CYC clubhouse, to be known as the V-dock hoist pier (see Addendum Figure 6). Adding this equipment was requested and very strongly supported by the north-end sailing center committee and users.

Pile Replacement—Design refinements will result in the use of approximately 870 steel piles for the dock replacement project. Of these, 82 steel piles are already in place in the reconstructed A-dock (38 piles) and G-dock (44 piles); therefore, the net number of new steel piles to be used in the dock replacement project for which permits are currently being sought is 788.

Steel piles will replace existing treated wood piles within the marina. The total number of piles (870) is approximately 145 fewer piles than with the selected SEIS Alternative, and approximately 172 fewer piles than presently exist within the marina. The piles will be typically 16 to 18 inches in diameter, with a ½-inch wall thickness, though there may be some 22-inch diameter piles in certain locations (e.g., to secure larger berths, or outside the T-head at the west end of docks in deeper water). The number of piles to be used may vary somewhat depending on final selection of the type of float system to be used.

Based on the results of geotechnical borings completed within the marina basin in August 2002, the Port is able to confirm its intention to use the vibratory method of pile extraction and pile driving. It is likely that an impact hammer will be used to “set” the piles (i.e., drive them the last 5 feet or so) in firm substrate. It is estimated that 2 to 5 or 6 piles per day will be installed during pile driving operations. If two pile driving rigs are employed on the site simultaneously, the number of piles installed per day could double.

Utilities and Infrastructure—During the design refinement process, existing utilities and infrastructure that serve Shilshole Bay Marina were examined more closely and specifically than during preparation of the SEIS. It was found that several existing systems lack the capacity to serve the dock replacement project, and/or are outdated and in need of upgrades to serve the facility for the next 30 to 50 years. This section reports in more detail proposed improvements to onsite utilities and services to docks.

- **Electrical Power**²—Additional investigation confirmed that the existing electrical distribution system has insufficient capacity to supply power necessary to serve the dock replacement project. The estimated electrical demand load with the design refinements is 6,000 kva, compared to the existing 3,400 kva demand load to serve the existing marina configuration.

In order to meet the increased electrical demand for the dock replacement project and possible future expansions, a new 10,000 kva-size main substation is proposed. The new substation will be constructed at the south end of the property, adjacent to the north side of Seaview Boatyard, east of the new B-dock/C-dock gangway (see Addendum Figures 7 and 8a). The existing main electrical substation east of G-dock and primary wiring under the seawall promenade will be removed when the new electrical system is operational. The new high voltage 10,000 kva substation, 30 feet wide by 60 feet long by 8 feet high, will be installed on a concrete pad, surrounded by a chain link fence for safety.

Seattle City Light primary power will be extended to the new electrical substation from the Seaview Avenue NW right-of-way. High-voltage (15-kv) service wiring from the new main electrical substation will be fed to a proposed new duct bank approximately 5.5 feet wide by 5 feet deep in the Seaview Avenue NW right-of-way, approximately 25 feet west of the existing curb. The total length of the duct bank for electrical power, communication mains and cross-mains will be approximately 6,900 lineal feet. Cross-mains will be installed

² Electrical power is supplied to the marina from a 2,500 kva-size transformer located at a substation near G-dock. The SEIS incorrectly reported the size of this transformer as 5 kilowatts.

east/west from the underground electrical power and communications mains to proposed new electrical/communications service centers at six parking lot locations (see Addendum Figures 7 and 8a through 8c). High-voltage (15-kv) wiring will be terminated within vaults in these service centers. Electrical wiring will be extended from the aboveground electrical vaults to the seawall near proposed new access piers. Secondary power (480-volt or 208-volt) and communications conduits will be installed north/south on the face of the seawall, and will be terminated in 2-foot wide by 9-inch deep, by 4-foot 11-inch high electrical disconnect switch boxes installed on the seawall promenade at the seawall near each gangway for extension onto each dock as it is replaced (see Addendum Figures 10 and 11). There will be one disconnect switch per dock (two per gangway), 22 total. Multiple penetrations of the seawall will be made by concrete coring to route conduits between vaults within the parking lot and terminations on the seawall. PVC pipe sleeves will be installed in conduit penetrations and then north/south along the face of the seawall to convey electrical lines. This method of providing electrical and communications services to the docks were not previously contemplated at the time the SEIS was prepared.

Proposed electrical equipment dimensions are 16 feet long by 4 feet wide by 7.5 feet high, enclosed by a 6-foot high chain link fence 28 feet long by 14 feet wide (392 sf each) at six locations (see Addendum Figure 9).

Consistent with the SEIS description of on-dock utility services, electrical power will be extended to individual berths in a raceway (pipe sleeve, conduit) internal to the new float system. All connections (float-to-float, float-to-gangway, and gangway-to-seawall) will be flexible to allow for changes in tidal elevation.

All new proposed electrical and mechanical equipment will be installed in a single phase of construction near the beginning of the dock replacement project. This approach will minimize construction costs, construction disturbance, and utility downtime. Existing electrical transformers at the seawall will be removed as new docks are connected to the new electrical system. There will be a temporary period of time (currently projected to occur between September 2005 and January 2008) when both existing transformers and proposed new electrical and mechanical vaults will be present.

Electrical services will be routed through a separate penetration from the civil (water and sewer) utilities. Sewer lines may also be routed separately from the fire and water lines. The majority of seawall penetrations will be done either under or adjacent to proposed access piers at the head of each gangway.

- **Communications**—Dock telecommunications services will be upgraded to provide two cable pairs per berth with the dock replacement project. The average number of berths per dock with the design refinements is 70, requiring about 140 cable pairs per dock for 21 docks for telecommunications service (approximately 2,940 cable pairs, total), compared to 3,500 cable pairs estimated in the SEIS.

The Port of Seattle will provide a new telecommunications conduit system within the proposed Seaview Avenue NW right-of-way duct bank for use by Qwest Communications to install main telephone lines to serve the dock replacement project. The main telecommunications system duct bank will be installed in the same north/south utility corridor with the upgraded electrical system.

Main equipment for telephone, data, cable television, and dock entrance security systems will be housed within a new telecommunications building. The proposed building location is within the parking lot island currently occupied by the Shilshole Bay Marina sign, on the north side of the main entrance (see Addendum Figures 7 and 8b). It may be necessary to relocate the sign. The telecommunications building will be a wood-frame structure 8 feet wide by 12 feet long by 8 feet high, with lighting, power receptacles, heating and ventilation. Conduits will be extended from this building in a duct bank to a north/south duct bank along the Seaview Avenue NW right-of-way. From this main duct bank, telecommunication cables will be extended to termination cabinets in the electrical/ communications service centers within the parking lot. Four cabinets 1.5 feet long by 1.5 feet wide by 1.5 feet high are proposed for communication termination boxes at each of the six locations, enclosed within the same 28-foot long by 14-foot long fenced area (see Addendum Figure 9). From the electrical/communications service centers, telecommunication cables will be extended to the seawall and to docks as described above. All connections (float-to-float, float-to-gangway, and gangway-to-seawall) will be flexible to allow for changes in tidal elevation.

- **Water Supply**—The onsite water main south of O-dock is old and no longer reliable for fire protection and domestic use. This line, approximately 2,910 feet long, will be replaced as part of the dock replacement project. The SEIS identified only replacement (upsizing) of the onsite water main north of U-dock.

Other planned water system improvements not previously contemplated at the time the SEIS was prepared include installation of a secondary water main alongside the new electrical and communication main duct banks, in the Seaview Avenue NW right-of-way. The secondary water main will be fed from the City water main at the south end of the marina, and will extend the full length of the marina. The secondary main will be tied into the onsite water main along the seawall to create a water-piping loop within the marina. Since the marina is fed from the City water main from the south end only, the proposed water-piping loop will improve the water delivery system within the marina for fire protection and domestic use.

The estimated construction time for water system upgrades, coordinated with the construction of electrical/communication system duct banks, is approximately 4 to 5 months.

A Utility Street Use Permit will be required from the City of Seattle Department of Transportation (SDOT) for the utility work in the City of Seattle right-of-way along Seaview Avenue NW. The City has the right to ask the Port of Seattle to remove or relocate utilities installed in the Seaview Avenue NW right-of-way if the utilities interfere with any local improvement district work or with construction for street or transportation purposes authorized or ordered by the City.

Water service to relocated docks will be modified. A backflow assembly consisting of separate backflow devices for fire and domestic water supply services, the domestic water pressure-reducing valve and meter, and the fire department pump connection will be installed on the shore side of each access pier in a mechanical vault to be supported on a platform on the waterward side of the seawall (see Addendum Figure 10). The dimensions of the mechanical vaults will be 5 feet 2 inches long by 4 feet 6 inches wide by 4 feet 8 inches high. The fiberglass-grated platforms on which these vaults will be placed will be 9 feet 6 inches long by 7 feet wide, enclosed by a 3.5-foot high guard rail (see Addendum Figure 11). This location for the mechanical backflow assemblies was not previously contemplated at the time the SEIS was prepared.

Equipment within each mechanical vault will serve the pair of docks served by each access pier. Separate domestic and fire protection water pipe fittings will be provided for each access pier connection. Six-inch diameter water cross-mains will be installed from the 12-inch diameter water main adjacent to the seawall promenade to each of the backflow assemblies.

Consistent with the SEIS description, water service to each dock will be suspended from each gangway and extended to individual berths within an enclosed raceway (pipe sleeve, conduit) internal to the new float system. The only substantive design refinement is to loop the domestic water line on each dock, running up one side of the dock, across to the other side and back toward shore.

- **Sewer Service**—The dock replacement design refinements include providing sewer service on all docks. This was not an element of the selected SEIS Alternative described in the SEIS. Individual pump-out stations on each dock will pump sewage to the landside sewage collection system. Sewer manholes will be installed on the shore side of each access pier to collect sewage from the dock sewer line and transfer the wastewater by gravity flow through existing and new side sewers to the City sewer main along Seaview Avenue NW.

Traffic and Parking—The design refinements will change the overall density of berths throughout the main marina compared to either the existing marina configuration or the selected SEIS alternative. For example, the number of berths in the south basin of the main marina (south of I-dock) will be reduced by 153 berths compared to the existing marina configuration (105 fewer berths than with the selected Scoping Response Alternative). The number of berths in the north basin of the main marina (north of and including I-dock) will be increased by 107 berths compared to the existing marina configuration (30 more berths than with the selected Scoping Response Alternative). Design refinements to the north-end Sailing Center will reduce the number of berths by 45 compared to the existing marina configuration (28 fewer berths than with the selected Sailing Center Improvements).

When the design refinements in the north basin and north-end Sailing Center are considered together, the number of berths at the north end of Shilshole Bay Marina would increase by 62 compared to the existing marina configuration, or by only two compared to the selected SEIS Alternative. (See ANALYSIS – SEPA, Traffic and Parking section below for the revised analysis of trip generation impacts.)

The design refinements include replacing the Shilshole Bay Marina main electrical substation, constructing a new telecommunications building, and constructing six new electrical and communications service centers throughout the parking lot (see Addendum Figures 7 and 8a through 8c). A new main electrical substation will be constructed in the parking lot area adjacent to the north side of Seaview Boatyard, along the south edge of the southernmost drive aisle. The existing main electrical substation located in the parking lot area just east of G-dock will be removed and replaced with parking spaces. A new telecommunications building will be located at the end of the parking aisle east of I-dock. The six new electrical and communications service centers will be located in the parking lot east of D-dock, F-dock, K-dock, M-dock, Q-dock, and U-dock. These new service centers will displace some parking within the lot, require reconfiguration of some drive aisles, and require closing one driveway. (See ANALYSIS—SEPA, Traffic and Parking for discussion of parking and onsite circulation impacts.)

Construction Schedule—The Port Commissioner selected the 7-year construction schedule after issuance of the Final SEIS. Design refinements include constructing the dock replacement project over a period of 3 years as a cost-saving measure, and in order to minimize long-term inconveniences associated with construction activity on the site. Additional planning has identified measures to minimize customer displacement impacts during this shorter construction schedule.

A 3-year schedule is within the range evaluated in the SEIS, which considered 16-month, 5-year, and 7-year construction schedule alternatives. To avoid sensitive life cycles of fish, in-water work will be performed between Fall and early Spring each year, during a specific “in-water work window” to be specified during the permitting process. Constructing within permitted in-water work windows was anticipated and addressed in the SEIS.

Aquatic Environment

- **Eelgrass**—The Port commissioned an *Eelgrass and Macroalgae Survey* (PIE 2002) in August 2001. An area between J-dock and Central Pier was found to contain several small, low-density patches of eelgrass. This occurrence is referred to as an eelgrass *zone*, rather than an eelgrass *bed* (PIE 2002). The “J-dock eelgrass zone” lies adjacent to the fuel dock and loading pier – the area of highest propeller-wash activity within the marina (see Addendum Figure 2). In addition to the J-dock eelgrass zone, eight small patches of eelgrass were also found on five of the 26 transects made along fairways and beneath docks north of Central Pier (PIE 2002). The highest average density of eelgrass present within the marina was found along the centerline of the J-dock eelgrass zone, measured at 31.2 turions per square meter (i.e., shoots per square meter). The average densities of the other transects surveyed within the J-dock eelgrass zone were sparse, ranging from 0.0 to 0.5 turions per square meter.
- **Macroalgae** was described in the SEIS as being attached to hard substrates such as docks, piles, and riprap. During the Port-commissioned *Eelgrass and Macroalgae Survey* (PIE 2002), macroalgae was also found along the soft-substrate marina bottom. Most of the holdfasts were attached to sediments in the fairways. Blades extended beneath all of the floating docks (PIE 2002).

Public Comments

Public notice of the project application was published on June 26, 2003. The required public comment period ended on July 25, 2003. No comments were received.

ANALYSIS - SHORELINE SUBSTANTIAL DEVELOPMENT

Section 23.60.030 of the Seattle Municipal Code provides criteria for review of a shoreline substantial development permit and reads: *A substantial development permit shall be issued only when the development proposed is consistent with:*

- A. The policies and procedures of Chapter 90.58 RCW;*
- B. The regulations of this Chapter; and*
- C. The provisions of Chapter 173-27 WAC*

Conditions may be attached to the approval of a permit as necessary to assure consistency of the proposed development with the Seattle Shoreline Master Program and the Shoreline Management Act.

Chapter 90.58 RCW is known as the Shoreline Management Act of 1971. It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy seeks to protect against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary incidental rights. Permitted uses in the shorelines shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water. The proposed improvements to Shilshole Bay Marina would not adversely impact the state-wide interest of protecting the resources and ecology of the shoreline, and the improvements would provide for the continued operation of a facility that is dependent upon its location in a shoreline of the state. The subject application is consistent with the procedures outlined in RCW 90.58.

The Shoreline Management Act provides definitions and concepts, and gives primary responsibility for initiating and administering the regulatory program of the Act to local governments. The Department of Ecology is to primarily act in a supportive and review capacity, with primary emphasis on ensuring compliance with the policy and provisions of the Act. As a result of this Act, the City of Seattle adopted a local shoreline master program, codified in the Seattle Municipal Code at Chapter 23.60, that also incorporates the provisions of Chapter 173-27, WAC. Title 23 of the Municipal Code is also referred to as the Land Use and Zoning Code. Development on the shorelines of the state is not to be undertaken unless it is consistent with the policies and provisions of the Act, and with the local master program. The Act sets out procedures, such as public notice and appeal requirements, and penalties for violating its provisions which have also been set forth in the Land Use Code.

In evaluating requests for substantial development permits, the Director must determine that a proposed use meets the relevant criteria set forth in the Land Use Code. The Shoreline Goals and Policies, part of the Seattle Comprehensive Plan, and the purpose and locational criteria for each shoreline environment must be considered. A proposal must be consistent with the general development standards of section 23.60.152, the specific standards of the shoreline environment and underlying zoning designation, any applicable special approval criteria, and the development standards for specific uses.

The proposed development actions occur on land classified as a waterfront lot (SMC 23.60.924) and is located within an Urban Stable (US) shoreline environment. The proposed improvements are associated with a marine retail sales and services facility and as such are a permitted use in the US shoreline environment and the underlying C1 40' zone.

Shoreline Policies

All discretionary decisions in the shoreline district require consideration of the Shoreline Goals and Policies, which are part of the Seattle Comprehensive Plan's Land Use Element, and consideration of the purpose and locational criteria for each shoreline environment designation contained in SMC 23.60.220. The policies support and encourage the establishment of water dependent uses existing at Shilshole Bay Marina (please refer to Land Use Policies L339 and L342). An area objective for this portion of the Puget Sound is to reserve waterfront lots for

marine retail sales and services while at the same time to protect and enhance migratory fish routes and feeding areas (please refer to Area Objectives for Shorelines of Statewide Significance, Policy L354 1d). The purpose of the Urban Sable (US) environment as set forth in Section 23.60.220 C7 is to support water-dependent uses by providing services such as marine-related retail and moorage at Shilshole Bay Marina.

The proposed improvements to Shilshole Bay Marina would facilitate the continued and enhanced operation of an existing marine retail sales and services facility, a use supported by both the purpose of the US shoreline environment and the policies set forth in the Land Use Element of the Comprehensive Plan. The replacement and relocation of the existing docks, reconfiguration of the existing moorage, and reconfiguration of existing parking will increase operational efficiency and enhance public/worker safety.

SMC 23.60.152 - Development Standards for all Environments

These general standards apply to all uses in the shoreline environments. They require that design and construction of all uses be conducted in an environmentally sound manner, consistent with the Shoreline Management Program and with best management practices for the specific use or activity. All shoreline development and uses are subject to the following:

- A. The location, design, construction and management of all shoreline developments and uses shall protect the quality and quantity of surface and ground water on and adjacent to the lot and shall adhere to the guidelines, policies, standards and regulations of applicable water quality management programs and regulatory agencies. Best management practices such as... fugitive dust controls and other good housekeeping measures to prevent contamination of land or water shall be required.
- B. Solid and liquid wastes and untreated effluents shall not enter any bodies of water or be discharged onto the land.
- C. Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum products shall be provided at recreational marinas, commercial moorage, vessel repair facilities, marine service stations and any use regularly servicing vessels....
- D. The release of oil, chemicals or other hazardous materials onto or into the water shall be prohibited. Equipment for the transportation, storage, handling or application of such materials shall be maintained in a safe and leak proof condition. If there is evidence of leakage, the further use of such equipment shall be suspended until the deficiency has been satisfactorily corrected.
- E. All shoreline developments and uses shall minimize any increases in surface runoff, and control, treat and release surface water runoff so that receiving water quality and shore properties and features are not adversely affected. Control measures may include, but are not limited to, dikes, catchbasins or settling ponds, interceptor drains and planted buffers.
- F. All shoreline developments and uses shall utilize permeable surfacing where practicable to minimize surface water accumulation and runoff.

- G. All shoreline developments and uses shall control erosion during project construction and operation.
- H. All shoreline developments and uses shall be located, designed, constructed and managed to avoid disturbance, minimize adverse impacts and protect fish and wildlife habitat conservation areas including, but not limited to, spawning, nesting, rearing and habitat areas, commercial and recreational shellfish areas, kelp and eel grass beds, and migratory routes. Where avoidance of adverse impacts is not practicable, project mitigation measures relating the type, quantity and extent of mitigation to the protection of species and habitat functions may be approved by the Director in consultation with state resource management agencies and federally recognized tribes.
- I. All shoreline developments and uses shall be located, designed, constructed and managed to minimize interference with or adverse impacts to beneficial natural shoreline processes such as water circulation, littoral drift, sand movement, erosion and accretion.
- J. All shoreline developments and uses shall be located, designed, constructed and managed in a manner that minimizes adverse impacts to surrounding land and water uses and is compatible with the affected area.
- K. Land clearing, grading, filling and alteration of natural drainage features and landforms shall be limited to the minimum necessary for development. Surfaces cleared of vegetation and not to be developed shall be replanted. Surface drainage systems or substantial earth modifications shall be professionally designed to prevent maintenance problems or adverse impacts on shoreline features.
- L. All shoreline development shall be located, constructed and operated so as not to be a hazard to public health and safety.
- M. All development activities shall be located and designed to minimize or prevent the need for shoreline defense and stabilization measures and flood protection works such as bulkheads, other bank stabilization, landfills, levees, dikes, groins, jetties or substantial site regrades.
- N. All debris, overburden and other waste materials from construction shall be disposed of in such a way as to prevent their entry by erosion from drainage, high water or other means into any water body.
- O. Navigation channels shall be kept free of hazardous or obstructing development or uses.
- P. No pier shall extend beyond the outer harbor or pierhead line except in Lake Union where piers shall not extend beyond the Construction Limit Line as shown in the Official Land Use Map, Chapter 23.32, or except where authorized by this chapter and by the State Department of Natural Resources and the U.S. Army Corps of Engineers.

As proposed and as conditioned below, the project complies with the above shoreline development standards. As conditioned, the short-term construction related activities should have minimal effects on migratory fish routes and do not warrant further conditioning.

The proposal is subject to a Hydraulics Project Approval (HPA) permit from the Washington State Department of Fisheries and Wildlife.

The Stormwater, Grading and Drainage Control Code (SMC 22.800) places considerable emphasis on improving water quality. In conjunction with this effort DCLU developed a Director's Rule 2000-16, to apply best management practices (BMPs) to prevent erosion and sedimentation from leaving construction sites or where construction will impact receiving waters. Due to the extent of the proposed work associated with replacement and relocation of the existing docks, reconfiguration of the existing nonconforming moorage, and reconfiguration of existing parking; the potential exists for impacts to Puget Sound during construction. Therefore, approval of the substantial development permit will be conditioned to require application of construction best management practices (BMPs). Completion of the attachment to the Director's Rule and adherence to the measures outlined in the attachment shall constitute compliance with BMP measures.

SMC 23.60.600 – Development standards for the US Environment

The proposal conforms to all of the development standards for the US environment, except for the relocation of the nonconforming yacht club as addressed below.

ANALYSIS - SHORELINE CONDITIONAL USE

The relocation of the existing Corinthian Yacht Club requires Shoreline Conditional Use approval. Further information on this component is provided below.

The existing moorage at Shilshole Bay Marina includes the Corinthian Yacht Club (CYC) clubhouse at the head of S-dock, overwater. This is a wood-frame structure, forty (40) feet by sixty (60) feet in dimension, two stories high, with a total of 4,800 square feet. In the Urban Stable shoreline environment, a yacht club is only allowed to have non-water-dependent facilities over water when the dry land portion of the lot is less than 50 feet in depth. As the dry land portion of Shilshole exceeds this depth, this criterion is not met. Therefore, the portions of the CYC with non-water-dependent facilities (such as the meeting rooms, group assembly area, offices and kitchen) are nonconforming with respect to the development standards of the US environment.

Relocation of the overwater yacht club may be authorized by a shoreline conditional use pursuant to SMC 23.60.122 E. Therefore, the proposal is evaluated in light of the shoreline conditional use criteria in WAC 173-27-160 and the provisions of SMC 23.60.122B. The overall purpose of a conditional use permit is to provide for flexibility in the application of use regulations consistent with the policies of the Shoreline Management Act (RCW 90.58.020).

SMC 23.60.034 Criteria for Shoreline Conditional Use Approvals.

Uses or developments which are identified in this chapter as requiring shoreline conditional use approval, and other uses which, although not expressly mentioned in lists of permitted uses, are permitted in the underlying zones and are not prohibited in the Shoreline District, may be approved, approved with conditions or denied by the Director in specific cases based on the criteria in WAC 173-27-160, as now constituted or hereafter amended, and any additional criteria given in this chapter. Upon transmittal of the Director's approval to the Department of Ecology (DOE), the permit may be approved, approved with conditions or denied by DOE. (Ord. 118793 Section 6, 1997; Ord. 113466 Section 2(part), 1987)

WAC 173-27-160 Review Criteria for Conditional Use Permits

The purpose of a conditional use permit is to provide a system within the master program which allows flexibility in the application of use regulations in a manner consistent with the policies of RCW 90.58.020. In authorizing a conditional use, special conditions may be attached to the permit by local government or the department to prevent undesirable effects of the proposed use and/or to assure consistency of the project with the act and the local master program.

(1) Uses which are classified or set forth in the applicable master program as conditional uses may be authorized provided that the applicant demonstrates all of the following:

(a) That the proposed use is consistent with the policies of RCW 90.58.020 and the master program;

The CYC relocation is consistent with the policies of RCW 90.58.020 and the Seattle Shoreline Master Program. Those policies favor enhancement of the shoreline environment, fostering of water-dependent uses and shoreline public access and recreation, and protecting views of the water. With respect to the Shilshole area in particular, the City's Shoreline Policies favor water-dependent recreational uses, and non-water-dependent commercial uses when providing access to the water, protecting views, and not usurping land usable for future water-dependent recreational uses.

The proposal would enhance the shoreline environment for fish and would facilitate public access and shoreline recreation in the overall context of a water-dependent recreational use. Views of the water would only be minimally affected, if at all.

(b) That the proposed use will not interfere with the normal public use of public shorelines;

The change in location of the CYC clubhouse will not interfere with normal public use of the shorelines. In fact, locating the CYC so that it can be part of the improved sailing center will facilitate additional public use of the shorelines.

(c) That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program;

The CYC relocation is compatible with other proposed uses planned for the north end of the marina. The CYC will be closer to the sailing center and will complement the activities at the center.

(d) That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and

Relocation of the CYC will not cause significant adverse effects to the shoreline environment. In fact, there would be an improvement to the shoreline environment resulting from the relocation. At present, the CYC clubhouse is located close to shore, shading the near shore fish habitat area. Relocation of the clubhouse includes positioning it further from shore and reorienting it on the diagonal, so that the shading of the near shore area by the structure is reduced in comparison to the present location. This decrease in near shore shading is a positive impact on fish, and juvenile salmonids are known to travel along the shoreline at Shilshole.

(e) That the public interest suffers no substantial detrimental effect.

The public interest would suffer no substantial detrimental effect from relocation of the CYC. The CYC clubhouse is an existing structure and use within the marina site. Relocating this structure within the site does not have detrimental effects, but instead has positive effects: 1) the clubhouse is located so that it can enhance the sailing center, and 2) near shore shading impacts of the structure are reduced.

- (2) In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

In reviewing the proposal and development in the area it does not appear that similar nonconforming uses exist. Granting of the conditional use permit should not produce a substantial adverse effect to the shoreline environment, nor should it lead to cumulative impacts.

- (3) Other uses which are not classified or set forth in the applicable master program may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this section and the requirements for conditional uses contained in the master program.

The master program classifies the existing “Yacht Club” as a water-dependent Institutional use. The proposal as noted above and illustrated in the MUP plans—appears to demonstrate consistency with the requirements of this section and the requirements for conditional uses contained in the master program.

- (4) Uses which are specifically prohibited by the master program may not be authorized pursuant to either subsection (1) or (2) of this section.

The master program does not prohibit a “Yacht club” as a water-dependent Institutional use. Refer to SMC 23.60.606 and 23.60.946 “Y”.

Conclusion

SMC Section 23.60.064 E provides authority for conditioning of shoreline substantial development permits as necessary to carry out the spirit and purpose of and assure compliance with the Seattle Shoreline Code, Chapter 23.60, and with RCW 90.58.020 (State policy and legislative findings).

WAC 173-27 establishes basic rules for the permit system to be adopted by local governments, pursuant to the language of RCW 90.58. It provides the framework for permits to be administered by local governments, including time requirements of permits, revisions to permits, notice of application, formats for permits, and provisions for review by the state’s Department of Ecology (DOE). As the Seattle Shoreline Master Program has been approved by DOE, consistency with the criteria and procedures of SMC Chapter 23.60 is also consistency with WAC 173-27 and RCW 90.58.

Thus, as conditioned below, the Director has determined that the proposal is consistent with the criteria for a shoreline substantial development permit and may be approved. Further, the goals of the Shoreline Master Program would be better served by authorizing the reconfiguration of the development containing the nonconforming use or uses. Such reconfiguration includes enhanced

upland and street views, limiting the location of structures over water, and improved view corridors and public access (see the Proposed Project Description above.) No covered moorage exists on the site.

DECISION – SHORELINE CONDITIONAL USE

The Shoreline Conditional Use application is **CONDITIONALLY APPROVED** per the MUP plans.

DECISION - SHORELINE SUBSTANTIAL DEVELOPMENT

The Shoreline Substantial Development permit is **CONDITIONALLY GRANTED** subject to the conditions listed at the end of this report.

ANALYSIS—SEPA (for conditions only)

The Port of Seattle, as Lead Agency, issued a Determination of Non-Significance for this project. The information in the Port’s SEPA determination, construction plans, and other information submitted by the Port, and the experience of the Department with the review of similar projects form the basis for this analysis and decision. The Department’s SEPA analysis encompasses all project elements, whether located within or outside of the Shoreline District. The following analysis is being conducted only to impose mitigating conditions where warranted under Seattle’s SEPA Ordinance.

Short-term Impacts

Utilities and Infrastructure

Total estimated grading quantities associated with proposed utility and infrastructure upgrades are shown in Table 1.

Table 1. Total Estimated Grading Quantities

	Cut	Fill	Excess Material³
Electrical and communications duct bank	7,028 cy	2,217 cy	4,811 cy
Water lines	6,345 cy	6,042 cy	303 cy
Estimated Totals:	13,373 cy	8,259 cy	5,114 cy

Excess soil to be hauled away from the construction site will require an average of 5 truck trips per day for the first 60 days of construction.

The electrical and communications duct bank work and installation of a new water main in the Seaview Avenue NW right-of-way will be installed as a single phase of work, though constructed in segments to minimize construction disturbance. Trenches will be covered prior to initiating work on the next segment, estimated to progress at a rate of about 100 feet per day. There will be a temporary loss of some parking spaces during each segment of the duct bank installation.

³ Excess material will be hauled away from the site for disposal at an approved upland location.

Electrical service lines to be extended to new floats will be installed while docks are vacant, therefore resulting in little or no disruption to existing service for moorage customers.

Onsite electrical system upgrades will be designed and installed in a manner that complies with City of Seattle standards and permit requirements.

Construction phasing, off-season construction, trenchless technologies and similar measures will be considered in the final design of utility infrastructures to minimize construction impacts to onsite parking and marina operations. During construction, open trenches will be temporarily plated-over at the end of each work shift. At completion of the water line installation, all trenches will be permanently backfilled and patched to match surrounding pavements.

The contractor will be required to comply with all applicable permits, rules and regulations, and with Port of Seattle contract documents. These documents specify the standards and requirements for Best Management Practices (BMPs) to carry out construction activities, including construction safety, security, and measures to avoid adverse environmental impacts, such as stormwater management, dust and noise control, and groundwater management.

Standard Best Management Practices for erosion control will be implemented during construction, in compliance with the City of Seattle Stormwater Grading and Drainage Control Ordinance, and Department of Construction and Land Use (DCLU) Director's Rule 16-2000. Measures to be implemented will also comply with the *Construction Control Technical Requirements Manual* (effective July 4, 2000).

BMPs to be utilized during installation of utilities through the seawall will include tarping around the location of coring to prevent debris from entering the water. Floating silt curtains may be utilized as well, to contain any debris from the coring or boring operations near the seawall from dispersing into the marina waters. Wastewater from the concrete coring process will be collected by vacuums for disposal at an approved location. Concrete debris from the coring process will be disposed at an upland location suitable to receive construction waste. Sediment from boring and trenching activities to install the utility lines adjacent to the seawall will be disposed at an approved upland location.

Traffic and Parking

The 3-year construction schedule is within the range evaluated in the SEIS, and would result in no additional transportation or parking impacts not previously considered. Temporary impacts to parking during construction under the design refinements would slightly exceed those previously described for the selected SEIS Alternative, but would be within the range considered for all construction schedule alternatives. The SEIS reported that the 7-year schedule (selected by Port Commissioners) would require one on-site construction staging area approximately 12,000 sf in size that would temporarily displace approximately 40 parking spaces. The utility system upgrade work now proposed is estimated to displace an additional 12 parking spaces per day along the east property boundary and near the seawall during the 4- to 6-month duration of this work at the beginning of the dock replacement project. This cumulative total (52 parking spaces) is within the range evaluated in the SEIS for the most accelerated construction schedule (16 months, two staging areas, 80 parking spaces temporarily displaced).

Construction Activities

Construction activities could result in the following adverse impacts: emissions from construction machinery and vehicles; increased dust levels associated with grading and demolition activities; increased noise levels; occasional disruption of adjacent vehicular traffic, and small increase in traffic and parking impacts due to construction workers' vehicles. All of these impacts are minor in scope and of short duration. Several construction-related impacts are mitigated by existing City codes and ordinances (such as the Stormwater, Grading and Drainage Control code and Street Use ordinance, and mitigating measures described above pursuant to the Shoreline Master Program) applicable to the project. Since the proposal site is located in a commercial area, noise impacts would be sufficiently mitigated by the Noise Ordinance and no other measures or conditions are warranted.

Long-term Impacts

Shilshole Bay Marina has been a recreational marina for many years and is located within a commercial area. The replacement and relocation of the existing docks; and relocation of the existing nonconforming Corinthian Yacht Club represents a modest change in long-term or use-related impacts.

Certain long-term impacts are in part mitigated by the City's adopted codes and/or ordinances. Specifically these are: Stormwater Grading and Drainage Control Code (water quality); Land Use Code (height, parking); Seattle Energy Code (long term energy consumption); and Fire Department regulations (restrictions on the conditions and timing of hot work such as cutting, welding, and the like, and requirements for fueling of vessels). The long-term impacts to the aquatic environment, public views, utilities and infrastructure, traffic and parking, and land use are discussed below.

Aquatic Environment

- Intertidal/Shallow Subtidal Habitat Shading

Intertidal/shallow subtidal habitat is the area between mean higher high water (MHHW) and -10 feet mean lower low water (MLLW). Within Shilshole Bay Marina, this is the area between the seawall and -10 feet MLLW. Bottom areas deeper than -10 feet MLLW constitute subtidal habitat. The effects of shading are particularly important in intertidal/shallow subtidal habitat, as juvenile salmonids primarily travel along the shoreline.

The design refinements will result in a net decrease in intertidal/shallow subtidal habitat shading compared to either the existing marina configuration or the selected SEIS Alternative: approximately 4,130 sf less shading than the existing marina configuration, or 5,780 sf less shading than the selected SEIS Alternative. Grated structures through which light will pass (e.g., access piers, gangways, and mechanical equipment platforms suspended from the seawall) are not included in the intertidal/shallow subtidal habitat shading calculation.

Specific measures incorporated by the Port of Seattle to avoid and minimize the impacts of the dock replacement project to aquatic habitat within Shilshole Bay Marina include:

- Increasing the use of grated surfaces to reduce shading (see Addendum Figures 4, 10, and 11).
 - Extending dinghy floats and keelboat staging floats into deeper water (waterward of –10 feet MLLW; see Addendum Figure 6).
 - Relocating the CYC clubhouse westward, and reorienting it on the diagonal, to avoid shading in the intertidal/shallow subtidal habitat zone (see Addendum Figure 6).
 - Demolishing Central Pier and replacing it with a floating dock (resulting in a net reduction of intertidal/shallow subtidal habitat shading by 2,002 sf).
- Eelgrass

The Port-commissioned *Eelgrass and Macroalgae Survey* (PIE 2002) determined the location and densities of eelgrass within the marina so that impacts could be avoided during the separate seawall repair project, and during the dock replacement project. Once the eelgrass was surveyed, its location became the basis for specific avoidance and minimization measures incorporated into the design refinements. Specific changes to the design included moving the location of the J-dock lateral float further north of the existing Central Pier/proposed new commercial float location (increasing the fairway width) compared to the selected SEIS Alternative (see Addendum Figure 3). This dock configuration will avoid impingement of overwater coverage in the J-dock eelgrass zone.

Project construction activities that decrease light levels (i.e., produce shade) over eelgrass within the marina could have a negative effect on its growth and persistence. For this reason, construction equipment (such as, barges) will not be allowed to moor over the J-dock eelgrass zone. All known patches of eelgrass have been delineated and shown on the site plan (Addendum Figure 2), and will be delineated on construction drawings.

Turbidity associated with pile removal and pile driving could have a similar affect on eelgrass by suppressing light and/or resulting in deposition of suspended sediments. A larger number of piles will be removed with the design refinements, due to demolition of Central Pier (291 piles). On the other hand, fewer new piles will be driven (on the order of 145 to 172 fewer piles compared to the selected SEIS Alternative or the existing marina configuration, respectively). The occurrence of turbidity at the time of pile removal and pile driving is localized and temporary. Therefore, pile removal and pile driving associated with Central Pier and J-dock are of most interest, due to the proximity of these structures to the J-dock eelgrass zone.

Construction timing will minimize the potential effects of turbidity on eelgrass. The typical in-water work construction closure period coincides with the spring and summer months to protect migrating juvenile salmonids. This is also the period when eelgrass requires high light levels to produce new shoots and develop root mass. During early fall, when in-water work is proposed to begin in each of the three years of dock replacement, eelgrass growth dramatically declines with decreased light energy and it dies back at this time. Due to the proposed construction season each year within the 3-year construction schedule, turbidity associated with construction will not pose a risk to eelgrass within the marina.

With these proposed physical and temporal avoidance measures, no adverse impacts to existing eelgrass patches are expected to occur as a result of the dock replacement project.

- Macroalgae

Based on field observations reported by PIE (2002), shading does not appear to affect the presence of macroalgae within the marina. The distribution of macroalgae after construction is expected to be similar to that before construction, with macroalgae relatively undisturbed in the fairways and beneath the docks (i.e., beneath overwater structures), and reestablishing itself in new areas (e.g., on piles, floats and other surfaces). There is little concern that macroalgae attached to the marina bottom will suffer long-term effects of increased overwater coverage in the subtidal zone.

- Water Quality

Pile removal and pile driving will generate short-term, localized turbidity. Fewer piles will be driven with the design refinements (approximately 788) compared to the selected SEIS Alternative (approximately 939 piles).⁴ A greater number of piles will be removed as a result of the demolition of Central Pier (291 piles). Therefore, the net difference in short-term, localized occurrences of turbidity during construction will be approximately the same or slightly greater with the design refinements.

Existing treated timber piles are viewed by regulatory agencies as being detrimental to aquatic habitat. Therefore, it is concluded that removal of existing treated timber piles from the marina will be beneficial. Design refinements that will minimize potential water quality impacts include:

- Providing an increased number of larger berths (fewer berths overall), resulting in a reduced requirement for new piles
- Removing a larger number of existing treated timber piles: replacing Central Pier with a floating dock.

The construction-sequencing proposal calls for demolishing the old H-dock first, to be followed by construction of the new H-dock and new fuel lines within the H-dock floats. Flexible transfer hoses will be routed from the new fuel lines at the landward end of the new H-dock to the bulkhead location of the existing landside supply lines. Once the new H-dock is in place, the existing fuel line system will be shut down. All lines will be properly drained to containers, and all valves will be closed. The existing fuel float will be relocated to the end of the new H-dock, and the fuel lines in the fuel float will be connected to the new fuel lines at the outer end of H-dock. The existing fuel lines will be disconnected at the seawall and the new fuel lines from H-dock will be connected at the seawall. The existing fuel lines on the Central Pier fixed pier structure will then be demolished and disposed in accordance with all applicable regulations. Best Management Practices such as floating containment booms will be utilized during the switchover to the new system and demolition of existing fuel lines under the Central Pier.

⁴ Both pile count numbers (design refinements and selected SEIS Alternative) are net of the 82 piles already in-place with the reconstructed A-pier (38 piles) and G-dock (44 piles).

- Fish

Driving steel piles with impact hammers has recently received more scrutiny than in the past due to the occurrence of fish kills when large piles (typically those greater than 24 inches in diameter) are driven into hard substrate (personal communication between Darrell Desjardin, Port of Vancouver, B.D., and Glenn Grette, Grette Associates, 2003). The potential impacts to fish of driving steel piles will be evaluated further during project permitting. A few 22-inch diameter piles may be used on docks with the largest berths, and on the outer “T-head” (west end) of floating docks; however, the majority of the piles will be 16 to 18 inches in diameter (see Addendum Section 7.11, Pile Replacement). Therefore, based on construction timing, the size of the piles, the planned reliance on vibratory pile driving methods, and only limited use of impact pile driving, the risk of impacts to salmonid and non-salmonid fishes is considered to be small.

Aesthetic (Public) Views

The selected SEIS Alternative considered relocating the CYC clubhouse to the new V-dock, reoriented parallel (north/south) to the seawall compared to its perpendicular (east/west) orientation adjacent to S-dock in the existing marina configuration (see Addendum Figures 2 and 3). The design refinements confirm the proposal to relocate the CYC clubhouse, now in a diagonal reorientation to the seawall, adjacent to the north side of the new V-dock (see Addendum Figure 3). Design refinements also include electrical, communications, and mechanical equipment that will change views across the site from the sidewalk along Seaview Avenue NW and from the seawall promenade.

The City of Seattle SEPA Ordinance (Seattle Municipal Code Chapter 25.05) protects public views of significant natural and human-made features: Mt. Rainier, the Olympic and Cascade Mountains, the downtown skyline, and major bodies of water including Puget Sound, Lake Washington, Lake Union and the Ship Canal, from public places consisting of the specific viewpoints, parks, scenic routes, and view corridors listed in the Ordinance. The public places listed in the SEPA Ordinance relevant to the Shilshole Bay Marina dock replacement project are Golden Gardens Park and the designated scenic route of Seaview Avenue NW. The view impacts of the dock replacement proposal have been evaluated from these two locations, as well as from the onsite seawall promenade.

None of the improvements proposed within the dock replacement project will alter water or mountain views from Golden Gardens Park. The park and its associated parking lot are north of the public boat launch that borders the Shilshole Bay Marina site. Mature landscaping in planting islands at the north end of the marina parking lot and the existing Little Coney restaurant building block views of the CYC clubhouse relocation site, and of proposed electrical, communications, and mechanical equipment as viewed from Golden Gardens Park.

The CYC clubhouse in its present location adjacent to the north side of S-dock is almost entirely blocked from straight-on view from the Seaview Avenue NW sidewalk by Building M-6, an existing restroom and shower facility within the parking lot. The M-building is 45 feet long, compared to the 40-foot width of the CYC clubhouse. Only about 4 feet of the structure (less than the width of the information board at this location) is visible from the north end of M-6. The proposed clubhouse relocation site (the north side of the new V-dock) is presently an open fairway between U-dock, Ancro dock and dinghy floats of the north-end sailing center (see Addendum Figure 6). There are unobstructed views of the Olympic Mountains through this fairway from both the Seaview Avenue NW sidewalk and the seawall promenade. Views of

Puget Sound through this fairway are partially obstructed by the breakwater from both locations. At times, vans or other vehicles with more height than passenger vehicles obstruct mountain and water views across the parking lot from Seaview Avenue NW. Relocating the CYC clubhouse to this fairway would obstruct views of Puget Sound and the Olympic Mountains from some locations on the seawall promenade and the Seaview Avenue NW sidewalk. Views of Puget Sound and the Olympic Mountains will continue to be visible from many locations along the promenade and sidewalk. The clubhouse will be 56 feet long in its diagonal orientation within the view corridor, compared to 40 feet wide in its existing perpendicular orientation, or 60 feet wide in the parallel orientation described in the selected SEIS Alternative. The 40-ft expanse of water and mountain views in the vicinity of the north side of S-dock will be opened up from the seawall promenade when the CYC clubhouse is relocated to the north side of the new V-dock.

The dock replacement project utilities and infrastructure upgrade proposal includes constructing a new main electrical substation (and removing existing electrical transformers), a new telecommunications building, electrical/communications service centers at six parking lot locations, and mechanical vaults on grated platforms suspended from the seawall at 11 locations to serve pairs of docks. These project elements will increase the number of structures within the parking lot and suspended from the seawall. They will be similar in height and appearance to existing solid waste and recycling collection centers (surrounded by 6-foot high solid wood fences), and existing electrical/mechanical equipment (ranging in height from approximately 2 feet to 7 feet). The new main electrical substation will be 8 feet high surrounded by a 6-foot high chainlink fence. The new main electrical substation and two of the electrical service centers are proposed at locations where they will be blocked from view from the Seaview Avenue NW sidewalk by mature landscaping in existing parking lot planting islands (see Addendum Figures 8a through 8c).

Electrical/communications service centers will be 7.5 feet high surrounded by a 6-foot high chainlink fence, and mechanical vaults suspended from the seawall will be 4 feet 8 inches high surrounded by a 3.5-foot high guardrail, equal to the height of the seawall guardrail (see Addendum Figures 9 and 11). Where they occur in unobstructed parking lot locations, four electrical/communications service centers will be in the foreground of views through sailboat masts toward Puget Sound and the Olympic Mountains. They will not obstruct views of the Olympic Mountains or Puget Sound from vantage points along the Seaview Avenue NW sidewalk. The electrical/communications service centers will not block views from the seawall promenade, as they will be east of the seawall within the parking lot.

Of the utility structures proposed, only the mechanical vaults will be waterward of the seawall promenade, and therefore visible to persons looking west from this pedestrian walkway. At 4 feet 8 inches in height, these vaults will not block views of the Olympic Mountains or Puget Sound from the seawall promenade or Seaview Avenue NW sidewalk for persons of average height or taller.

Replacing the main electrical substation, constructing a new telecommunications building, and constructing six proposed electrical/communications service centers within the parking lot will result in the loss of landscaping in four parking lot landscape islands (see Addendum Figures 8a through 8c). Existing landscaping in these planting islands consists of mature (40+ years old) trees (pine, flowering cherry, Norway maple), evergreen azaleas, rhododendrons, and other perennial shrubs.

Traffic and Parking

The design refinements are expected to generate approximately 270 fewer weekday trips and 580 fewer Sunday trips than the existing marina configuration. The design refinements would also generate approximately 305 fewer weekday trips and 660 fewer Sunday trips than the selected SEIS alternative (Heffron Transportation, May 14, 2003).

Replacing the main electrical substation, constructing a new telecommunications building, and constructing the six proposed electrical/communications service centers will result in a net loss of 21 onsite parking spaces (see Addendum Figures 8a, 8b, and 8c). The largest reduction will occur in the parking lot east of M-dock, where the electrical/communications service center will be located in the middle of the drive aisle. The location of this pad and the pad proposed east of U-dock will interrupt existing traffic circulation, and will require reconfiguration of some parking lot landscape islands and drive aisles. The service centers may also result in circuitous onsite circulation for marina users. The proposal to close the existing driveway near the M-6 building, east of U-dock (Addendum Figure 8c), and proposed revisions to parking aisle circulation will avoid significant adverse impacts associated with construction of the electrical/communications service centers (Heffron Transportation, May 14, 2003).

The design refinements will decrease overall marina parking demand, though the increase in berths in the north basin will increase parking demand at the north end. The design refinements would result in two additional berths at the north end of the marina compared to the selected SEIS Alternative. Therefore, parking demand and impacts for conditions with the design refinements are expected to be virtually identical to those presented for the selected SEIS Alternative. Based on the findings described in the SEIS, weekday peak parking demand would be accommodated without adverse impact from the reduced parking supply associated with construction of electrical and communications equipment within the parking lot. However, the greatest increase in activity and demand would occur at the narrowest portion of the marina parking lot (north end) where there are the fewest parking spaces. Therefore, the increased demand would likely be accommodated in the marina parking lot in the nine new spaces created by closure of the driveway east of U-dock (farther south of the sailing center), or using on-street spaces. In addition, some parking demand currently served by spaces located east of M-dock may be shifted further south near K-dock. This would occur due to the reduction in parking capacity between M-dock and N-dock, the increased capacity near G-dock (due to removal of the existing electrical substation), and the reduced demand for parking in the south basin (due to fewer berths in this area). Overall parking provisions at Shilshole Bay Marina with the dock replacement design refinements would still exceed the City of Seattle Land Use Code requirement for existing uses on the site.

CONDITIONS – SHORELINE

Prior to Issuance of the Building Permit

1. Submit a completed drainage control plan that complies with SMC 22.802.020 B2d and Director's Rule 2000-16, (Category 2) BMPs for Construction Erosion and Sedimentation Control Plans. Adherence to the measures outlined in the attachment shall mitigate erosion and sedimentation impacts to Puget Sound.

During Construction

2. The owner(s) and/or responsible party(ies) shall take care to prevent debris from entering the water during construction and to remove debris promptly if it does enter the water. Materials and construction methods shall be used which prevent toxic materials, petrochemicals and other pollutants from entering surface water during and after construction. Appropriate equipment and material for hazardous material cleanup must be kept at the site.
 - a. Existing timbers, at or below the mudline, must be covered with an appropriate capping material to prevent creosote from entering the environment, and substrate voids should be filled with clean native substrate that is of the same size and type of the existing.
 - b. A containment boom shall be employed during demolition/construction of the fuel system for the Central Pier. Absorbent materials must be employed if a petrochemical sheen is observed. The boom should remain in place until all pollutants have been collected and sheens dissipate. Used absorbent materials should be disposed of in an appropriate upland facility.
 - c. During the coring/installation of utilities through the seawall—tarping will be required to prevent debris from entering the water. Floating silt curtains shall be utilized as well, to contain any debris from the coring or boring operations near the seawall from dispersing into the marina waters. Wastewater from the concrete coring process will be collected for disposal at an approved location. Concrete debris from the coring process will be disposed at a location suitable to receive construction waste. Sediment from boring and trenching activities to install the utility lines adjacent to the seawall will be disposed at an approved upland location.
3. All disposed materials must be deposited in a landfill, which meets the liner and leachate standards of the Minimum Functional Standards, Chapter 173-304 WAC.
4. Catchbasins should be protected during demolition, construction and repaving to prevent any deleterious material from entering the water.

CONDITIONS - SEPA

None.

Signature: (signature on file) Date: September 8, 2003
Colin R. Vasquez, Land Use Planner
Department of Design, Construction and Land Use